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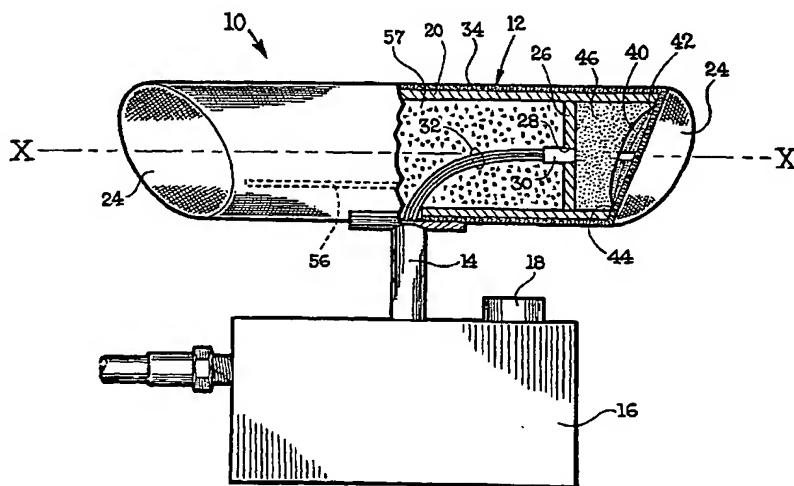
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(54) Title: MICROPHONE IN A CYLINDRICAL HOUSING HAVING ELLIPTICAL END FACES



(57) Abstract: A microphone has a hollow cylindrical housing with a lateral axis, and two non-parallel elliptical end faces oriented mirror symmetrically with respect to a plane perpendicular to the lateral axis. Two circular transducer mounting plates extend across the housing, adjacent the respective end faces, perpendicular to the lateral axis and carry two microphone transducers mounted centrally in the mounting plates for receiving sound from outside the transducer mounting plates. The ends of the housing are covered with end panels of an air-pervious material. Sound-damping tragus pads are secured to inner faces of the end panels, with each tragus pad having an elliptical periphery spaced from the housing to provide an undamped elliptical path for the transmission of sound. In use,

microphone is normally positioned with the lateral axis horizontal and the long axes of the two elliptical end faces converging downwardly to a front side of the microphone to meet at a dihedral angle of 70 degrees 32 minutes. These end faces are identified as 'right' and 'left' end faces. The microphone in one application is an essential component of a hearing assist or aid also including a mount for mounting the housing on an eyeglass frame such that when worn, the lateral axis is substantially horizontal and the elliptical end faces converge forwardly and downwardly. Two amplifiers are coupled to the respective microphone transducers and drive respective earpiece transducers. In another version of the hearing assist or aid the microphone is divided into two separate, left and right components that may be mounted on opposite sides of a human head with the lateral axes aligned and the elliptical end faces converging forwardly and downwardly. The two components of this hearing assist may be located on or adjacent to the lateral zero axis of the human head, thus providing a more accurate representation of the surrounding sound field. Also disclosed is an improved loudspeaker system.

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